25X1

[redacted] ary 1955

MEMORANDUM FOR THE FILES

SUBJECT: Conference with [redacted] (Perkin and Elmer 25X1

1. In view of the fact that I was to be in Boston on 2 February to visit with [redacted] on matters in connection with the forthcoming 25X1
JAEIC estimate, it was agreed with Mr. Bissell that I would also visit Dr. James Baker at the computing laboratory at Boston University. The subjects for discussion with Dr. Baker were: (a) the interim decision that tandem flights would be made in most cases although the distance between planes had not yet been determined, (b) the security difficulties caused by telegrams such as the one from Scott of Perkin and Elmer to [redacted] 25X1
of Rand, (c) the delivery of equipment to HYCON and the difficulties involved in procurement of sufficient numbers and (d) the receipt of the drawings from Wright Field and the transmittal of them to HYCON. I also wanted to discuss with Dr. Baker the schedules for delivery of GFE which HYCON might want, van requirements for field station maintenance units and finally steps to be taken in connection with the establishment of a processing laboratory.

In discussing the tandem flight problem, I pointed out to Dr. Baker that radical steps had to be taken to reduce pay load weights in as much as it was becoming apparent that we needed minimum pay load weights in order to provide the barest margin of safety on long-range shuttle flights necessitated by the location of critical high priority targets. Dr. Baker was in full agreement but mentioned that outside of mount design and film load, nothing much could be done on reducing the weight of the A configuration as a whole. Splitting the A configuration was entirely feasible and the reexamination of the mount design to permit such splitting for tandem flight coverage would be accomplished. (IN later talks with Mr. Scott he too expressed concern over the weight estimate given for the mounts in the A configuration and noted that he would discuss this with [redacted] and probably [redacted] In this connection Dr. Baker noted that he had finished the calculation on the 24-inch lens intended for the B configuration and had ascertained that if lenses in accordance with this design could be produced in time, they could be used in the A configuration with the result of cutting the weight by several pounds and improving the resolution by a factor of 2. Production of such lenses was discussed with Scott who agreed to look into the possibility of getting them in time. This would not mean an increase in lens procurement but would merely mean delivery of the 24-inch lenses for the B configuration in advance of the previously scheduled times. It would also mean not having to procure 24-inch lenses from the Air Force. 25X1

By the time we got to the discussion of the security difficulties, Mr. Scott (P & E) had arrived for a visit with Dr. Baker on route to

TS [redacted] 25X1
Copy 1 of 3

Los Angeles to carry out discussion and negotiation of the subcontract with HYCON. I therefore took the matter of contacts and communications up directly with him. I indicated to him the inherent dangers and noted the fact that we were sending detailed instructions out. Mr. Scott was very understanding and happy to hear that we were getting out instructions that he desperately needed. In particular connection with his proposed discussions with [redacted] I advised Scott to make the contact, if he thought it essential, by asking [redacted] at HYCON to get in touch with [redacted] at Ramo-Wooldridge to arrange the meeting. We preferred that the meeting not take place at Rand or at Ramo-Wooldridge. I also advised Scott that I thought that inthe firstinstance it would be best to discuss the problem of recording data in connection with photography with Ramo-Wooldridge before seeking to consult with Raymond in as much as Raymond was only acting in a consultative capacity. Scott agreed that the above procedure was satisfactory to him.

25X1
25X1
25X1

On GFE for HYCON and the drawings requested by HYCON, I noted for Dr. Baker and Scott that the quantities requested were difficult to procure even when we had reduced the quantities by the two thirds figure previously agreed upon. I did advise Dr. Baker however that we had procured representative pieces of all the equipment for inspection and production line setup, ~~for HYCON inspection~~. I asked Mr. Scott to review with HYCON the numbers of the various components requested as GFE for the A configuration with a view toward further reductions both in the procurement and in processing through the HYCON line so as to reduce the procurement problem and reduce the cost of the HYCON contract. This Mr. Scott said he would take up as part of his contract negotiations with HYCON. I reviewed with Dr. Baker the list of drawings received from Wright Field and received from him the opinion that this should satisfy HYCON's requirements. On the other hand, he conceded that HYCON might want in addition some detailed drawings which he felt sure they would request either through him or through us.

In the course of the discussion on GFE I asked Mr. Scott to start discussion with HYCON at the earliest possible date on the subject of van requirements for field maintenance units. We tentatively agreed that the field station units should be reasonably small, air transportable, and completely self-sustaining (i.e. they should have a few kilowatt power plants installed and should contain all benches, tools, and equipment required for the field maintenance of all photographic equipment including auxiliary electronics).

The processing laboratory facilities were discussed only briefly because it was agreed that a meeting would be required within the next 30 days to firm up photographic equipment requirements, film manufacture, field test processing, as well as production processing. Such a meeting appears to be essential in view of the fact that during the next two to three weeks the feasibility of the various courses of

TS [redacted] 25X1
Copy of

action being considered and some firm notions of designs will become apparent. Manufacturing and procurement schedule information will also be available. Thus freezing of designs, schedules and numbers of equipments will be possible and should be accomplished. This was strongly agreed to by both Scott and Dr. Baker and it was tentatively established that all hands including Dr. Land, Dr. Baker, Acker, Scott and representatives of the central group would meet on the photographic problem late in February or early in March.

I had a brief discussion with Scott concerning the forthcoming meeting in Hartford on 8 February between security and contract personnel. I advised Scott that either I or someone from my office would probably also attend in order to obtain a first hand report from Scott on the discussions in the Los Angeles area.

Several small points were raised that are worth mentioning. First, window sets may be higher than estimated. However this has to be examined still further and no final designs have yet been reached. Second, Dr. Land has apparently not yet started working on the light weight film problem. This tied in with the fact that the Boston University reconnaissance research laboratory had found in some experiments conducted last summer on Pikes Peak that high contrast film (i.e. high gamma emulsions) was very useful in connection with the haze penetration problem and yielded far better results than infra red film. The fabrication of the periscope was also discussed briefly and I brought to Scott's attention that consideration had to be given in the design to the fact that the periscope operator would not be able to apply his eye to the eye piece in view of the fact that he would be wearing a rather large and bulky face mask. Mr. Scott agreed that a 9-inch eye piece was indicated as a minimum. Scott mentioned that he was having difficulty with the follower mechanism which connected the camera and the periscope. It is his desire to construct a periscope and follower mechanism arrangement such that the observer finds his target in the periscope well ahead of the airplane and having found the target pushes a button. The position of the target with respect to the plane is then fed into a computer which will take into account the speed of the plane and the angle of the target. When the plane reaches the appropriate position, the computer feeds an impulse to the camera shutter and the photograph of the particular target is made. Such a system gives the operator a reasonable amount of time to search out his target before the plane passes over it. However this entails some difficulties in design in order to provide a memory for the computer and some means of taking into account the drift of the airplane. Thus far the solution of the drift problem is unclear.

TS [redacted]
Copy of

25X1

The discussions on the above lasted from approximately 3:00 to 7:30 at which time Mr. Scott departed in order to board a plane for Los Angeles. Dr. Baker and I continued for approximately 3/4 of an hour and we parted at approximately 8:15. I returned to Washington via the Federal and arrived in Washington approximately 8:30 a.m., February 3, 1955.

[redacted] 25X1

HIM:mah
3 Feb 55

Distribution:
0 - Subj
cc - chrono
cc - DEA

TS [redacted] 25X1
Copy of